Notebook computer

User’s guide

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Notebook computer User's guide
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Notebook computer

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Preface

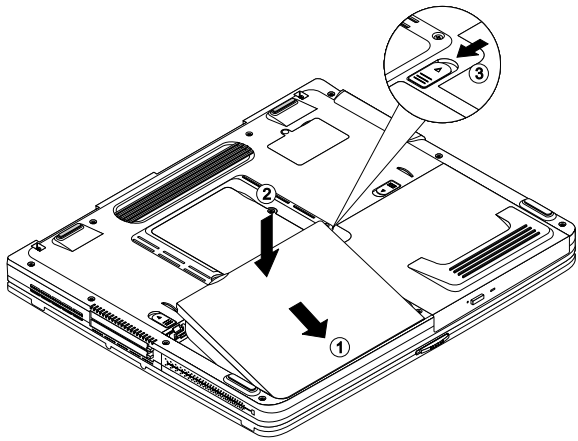
We would like to thank you for making this notebook computer your choice for your mobile computing needs. We hope you will be happy with your notebook computer as much as we enjoyed making it for you.

This User's guide introduces you to the many ways your computer can help you be more productive. This guide provides clear and concise information about the computer, so read it thoroughly.

Connecting your computer

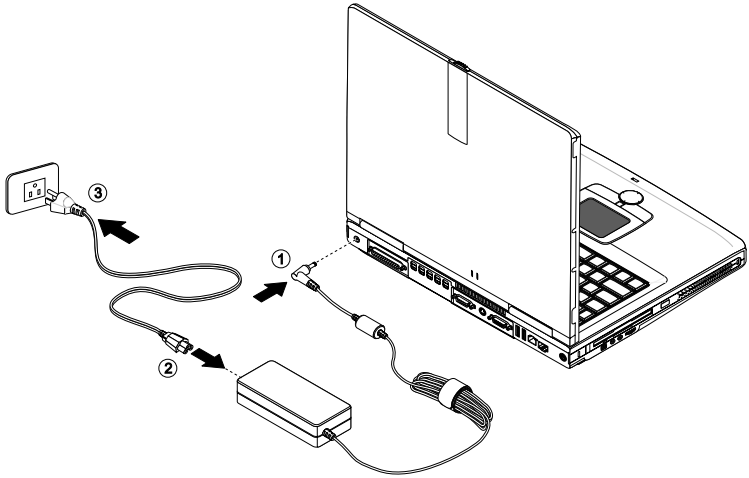
Connecting the computer is as easy as 1-2-3. Do as follows:

1 Insert the battery pack into the battery bay.



Note: When using a battery pack for the first time, fully recharge the battery, then disconnect the adapter to use up the battery before recharging again. Perform this action twice to condition the battery pack.

2 Connect the adapter to the computer.



3 Slide the display cover latch to the right to open the display, and tilt the display screen to a desired viewing angle. Then press the power switch to turn on the computer.

The POST (power-on self-test) routine executes and Windows begins loading.

Basic care and tips for using your computer

Turning your computer on and off

To turn on the computer, open the display cover, and press the power switch above the keyboard.

To turn the power off, do any of the following:

- Use the Windows shutdown command

  Click on **Start**, and select the **Shut Down** or **Turn Off** command.

- Use the power switch

  If you set the power switch to “Shut down”, you can use this button to turn off the computer. See Windows help for details.

Note: If you cannot power off the computer normally, press and hold the power switch for more than four seconds to shut down the computer. If you turn off the computer and want to turn it on again, wait at least two seconds before powering up.

Taking care of your computer

Your computer will serve you well if you take care of it.

- Do not expose the computer to direct sunlight. Do not place it near sources of heat, such as a radiator.
- Do not expose the computer to temperatures below 0°C (32°F) or above 50°C (122°F).
- Do not subject the computer to magnetic fields.
- Do not expose the computer to rain or moisture.
- Do not spill water or any liquid on the computer.
- Do not subject the computer to heavy shock and vibration.
- Do not expose the computer to dust and dirt.
- Never place objects on top of the computer to avoid damaging the computer.
- Do not slam the computer display when you close it.
- Never place the computer on uneven surfaces.

Taking care of your AC adapter

Here are some ways to take care of your AC adapter:

- Do not connect the adapter to any other device.
- Do not step on the power cord or place heavy objects on top of it. Carefully route the power cord and any cables away from personal traffic.
- When unplugging the power cord, do not pull on the cord itself but pull on the plug.
- The total ampere ratings of the equipment plugged in should not exceed the ampere rating of the cord if you are using an extension cord. Also, the total current rating of all equipment plugged into a single wall outlet should not exceed the fuse rating.

Taking care of your battery pack

Here are some ways to take care of your battery pack:

- Use only batteries of the same kind as replacements. Turn the power off before removing or replacing batteries.
- Do not tamper with batteries. Keep them away from children.
- Dispose of used batteries according to local regulations. Recycle if at all possible.

Cleaning and servicing

When cleaning the computer, follow these steps:

1 Power off the computer and remove the battery pack.

2 Disconnect the AC adapter.

3 Use a soft cloth moistened with water. Do not use liquid or aerosol cleaners.

If any of the following occurs:

- The computer has been dropped or the body has been damaged.
- Liquid has been spilled into the product.
- The computer does not operate normally.

Please refer to "Troubleshooting my computer" on page 79.

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1 Getting familiar with your computer

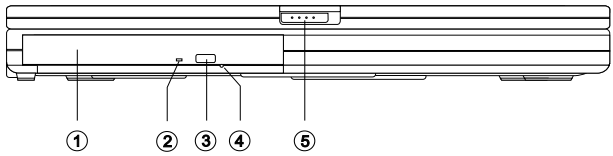
This computer combines high-performance, versatility, power management features and multimedia capabilities with a unique style and ergonomic design. Work with unmatched productivity and reliability with your new power computing partner.

This chapter gives an in-depth "tour" of the computer's many features.

A tour of your computer

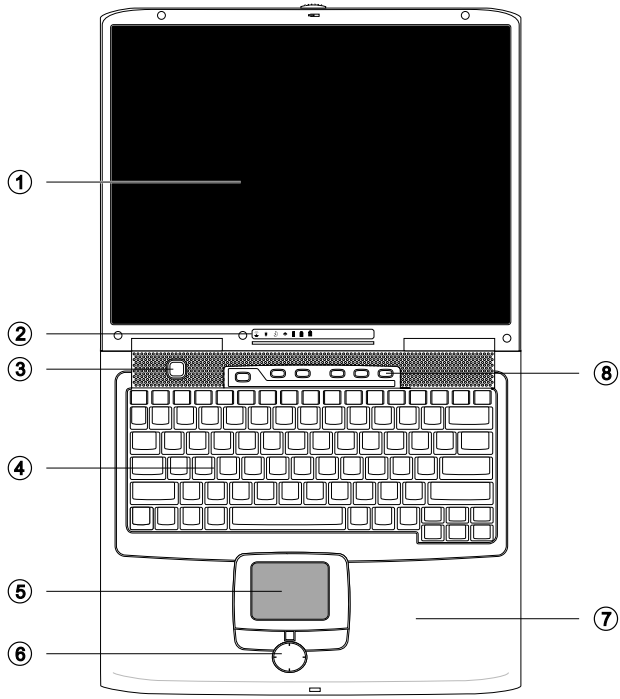
After setting up your computer as illustrated in the preface section, let us show you around your new notebook computer.

Front view



#	Item	Description
1	Media bay module	Installed in the Media bay, provides optical media access or secondary storage by way of removable modules.
2	Optical drive activity indicator	Lights/flashes when the optical drive is in use.
3	Optical drive eject button	Ejects the disc from the optical drive.
4	Optical drive emergency eject hole	Ejects the disc from the optical drive when the computer is turned off. See “How do I eject the optical drive tray with the computer turned off?” on page 82 for more details.
5	Display latch	Slide to the right to unlatch and open the display.

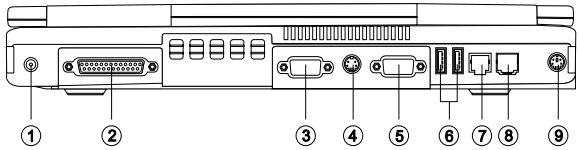
Top view



#	Item	Description
1	Display screen	Also called LCD (liquid-crystal display), displays computer output.
2	Status indicators	LEDs that show the status of the computer and its functions and components.
3	Power button	Turns on the computer power.
4	Keyboard	Inputs data into your computer.
5	Touchpad	Touch-sensitive pointing device which functions like a computer mouse.

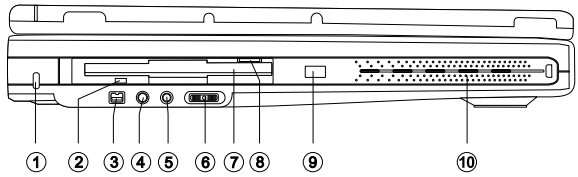
#	Item	Description
6	Click buttons (left, right and scroll pad)	The left and right buttons function like the left and right mouse buttons. The center button is a four-directional scroll pad.
7	Palmrest	Comfortable support area for your hands when you use the computer.
8	Easy Launch Keys	Buttons for launching frequently-used programs. See “Easy Launch Keys” on page 22 for more details.

Rear view



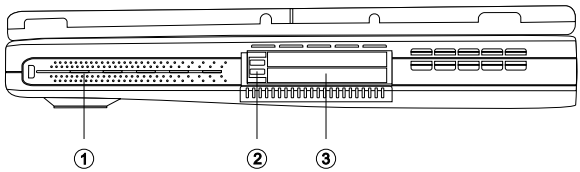
#	Item	Description
1	DC-in jack	Connects to the AC adapter.
2	Parallel port	Connects to a parallel device (e.g., parallel printer).
3	External display port	Connects to a display monitor.
4	Video-out port (optional)	Connects to a display device with S-video input.
5	Serial port	Connects to a serial device (e.g., serial mouse).
6	USB ports (two)	Connects to USB devices (e.g., USB digital camera).
7	Modem jack	Conncts a phone line.
8	Network jack	Connects to an Ethernet 10/100-based network.
9	PS/2 port	Connects to a PS/2-compatible device (e.g., PS/2 keyboard/mouse/keypad).

Left view



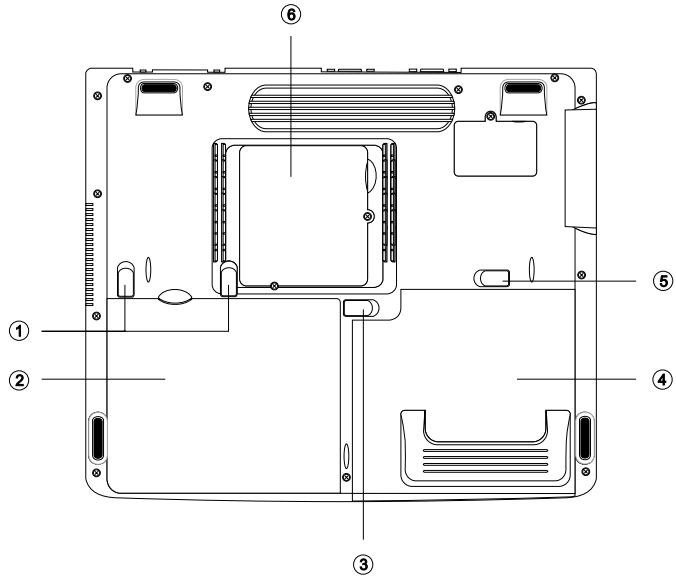
#	Item	Description
1	Security keylock	Connects to a Kensington-compatible computer security lock.
2	IEEE 1394 port (optional)	Connects to a IEEE 1394 compatible device (e.g., digital camcorder).
3	Floppy drive activity indicator	Lights when the floppy drive is in use.
4	Audio line-out jack	Connects to audio line-out devices (e.g., speakers, headphones).
5	Audio line-in jack	Connects an external microphone or an external audio line-in device.
6	Volume control knob	Adjusts the volume level.
7	Floppy drive	Accepts a 3.5-inch diskette.
8	Floppy drive eject button	Ejects the diskette from the floppy drive.
9	Infrared port (optional)	Links with other infrared devices (e.g., PDA)
10	Speaker (left)	Outputs sound.

Right view



#	Item	Description
1	Speaker (right)	Outputs sound.
2	PC Card eject buttons	Eject the selected PC Card from its slot.
3	PC Card slots	Accepts one Type III or two Type II/I PC Card(s).

Bottom view



#	Item	Description
1	Battery release latches	When battery lock is unlocked, press and hold to release the battery pack.
2	Battery	Installed in the battery bay, a charged battery powers your computer.
3	Battery lock	Locks/unlocks the battery pack in the battery bay
4	Media bay module	Installed in the Media bay, provides optical media access or secondary storage by way of removable modules
5	Media bay release latch	Press and hold to release the Media bay module.
6	Memory compartment	Houses the computer's main memory.

Features

This computer was designed with the user in mind. Here are just a few of its many features:

Performance

- Mobile Intel® Pentium® 4 Processor - M featuring Intel® Enhanced Speedstep™ technology
- Main memory expandable up to 1 GB
- High-capacity, Enhanced-IDE hard disk
- Lithium-Ion or Nickel Metal-Hydride battery pack
- Power management system

Multimedia

- 16-bit high-fidelity stereo audio with 3-D sound
- Built-in dual stereo speakers
- Removable Media bay - optical drive (CD-ROM, DVD-ROM, or DVD/CD-RW combo) or secondary storage (2nd hard disk)
- Large LCD display
- S-video output option
- Simultaneous LCD and CRT display

Connectivity

- High-speed 56Kbps V.92 fax/data software modem
- Ethernet/Fast Ethernet (10/100 Mbps)
- CardBus PC Card slots
- Universal Serial Bus (USB) ports
- IEEE 1394 port option
- Wireless LAN (802.11b) option

Human-centric design and ergonomics

- All-in-one design (CD or DVD in Media bay, floppy drive, and hard disk)
- Sleek, smooth and stylish design
- Full-sized keyboard with wide palm rest
- Ergonomically-centered touchpad pointing device with scroll pad

- Easy Launch Keys
- Fingerprint biometric security option

Expansion

- Upgradeable memory and hard disk
- Swappable Media bay modules

Display

The large graphics display offers excellent viewing, display quality and desktop-performance graphics. The computer supports a Thin-Film Transistor (TFT) liquid crystal display (LCD) displaying up to 16.7 million colors at 1400x1050 eXtended Graphics Array Plus (SXGA+) or 1600x1200 Ultra eXtended Graphics Array (UXGA) resolution (for models with a 15.0-inch display) or 1024x768 eXtended Graphics Array (XGA) resolution (for models with a 14.1-inch or 15.0-inch display).

Video performance

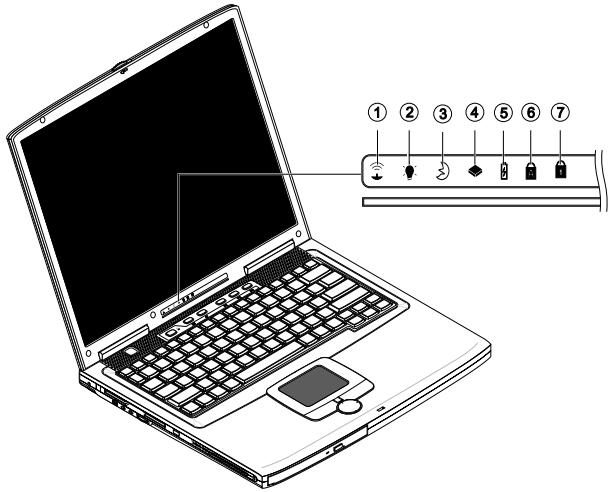
The system incorporates 16 or 32 MB of Double Data Rate (DDR) video memory to provide desktop-performance video performance for the most demanding video tasks.

Simultaneous display

The computer's large display and multimedia capabilities are great for giving presentations. If you prefer, you can also connect an external monitor when giving presentations. This computer supports simultaneous LCD and CRT display. Simultaneous display allows you to control the presentation from your computer and at the same time face your audience. You can also connect other output display devices such as an LCD projector or a television for large-audience presentations.

Indicators

The computer has easy-to-read status indicators (LEDs) located below the display screen.



The Wireless communication, Power and Sleep are visible even when you close the display cover, so you can the status of the computer while the cover is closed.

#	Function	Icon	Description
1	Wireless communication		Lights when a wireless connection is active. (option)
2	Power		Lights when the computer is on; flashes when the battery is low on charge.
3	Sleep		Lights when the computer enters Sleep mode; flashes when the computer is waking up from Sleep mode.
4	Media activity		Flashes when the hard disk or optical drive is accessed.

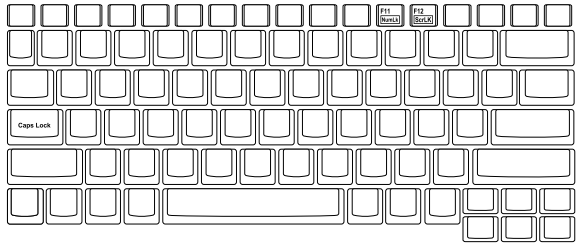
#	Function	Icon	Description
5	Battery		Lights when the battery is being charged.
6	Caps lock		Lights when Caps Lock is activated.
7	Num lock		Lights when Numeric Lock is activated.

Keyboard

The keyboard has full-sized keys with an embedded keypad, separate cursor keys, two Windows keys and twelve function keys.

Special keys

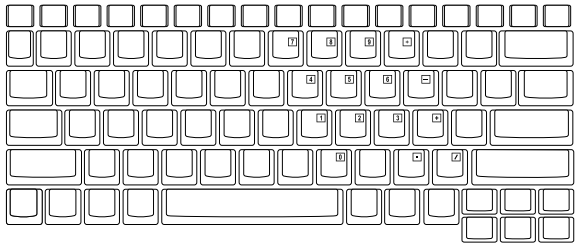
Lock keys



The keyboard has three lock keys which you can toggle on and off.

Lock Key	Description
Caps lock	When Caps Lock is on, all alphabetic characters typed are in uppercase.
Num lock (Fn-F11)	When Num Lock is on, the embedded keypad is in numeric mode. The keys function as a calculator (complete with the arithmetic operators +, -, *, and /). Use this mode when you need to do a lot of numeric data entry. A better solution would be to connect an external keypad. See “External keyboard” on page 43.
Scroll lock (Fn-F12)	When Scroll Lock is on, the screen moves one line up or down when you press ↑ or ↓ respectively. Scroll Lock does not work with some applications.

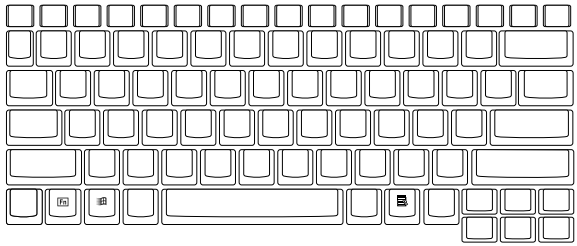
Embedded keypad



The embedded keypad functions like a desktop numeric keypad. It is indicated by small characters located on the lower edge of the keycaps. The embedded keypad can function in numeric mode or cursor-control mode.

Desired Access	Num lock On	Pad lock On
Number keys on embedded keypad	Type numbers in a normal manner.	Hold Shift while typing numbers.
Cursor-control keys on embedded keypad	Hold Shift while using cursor-control keys.	Use cursor-control keys in a normal manner.
Main keyboard keys	Hold Fn while typing letters on embedded keypad. Also hold down Shift for capital letters.	Hold Fn while typing letters on embedded keypad. Also hold down Shift for capital letters.

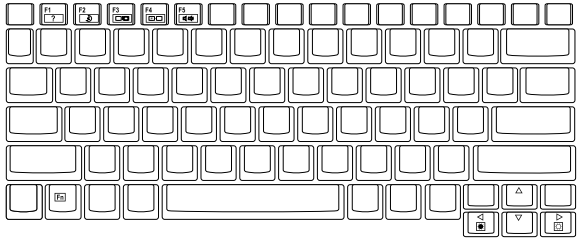
Windows keys



The keyboard has two keys that perform Windows-specific functions.

Key	Description
Windows logo key	Start button. Combinations with this key perform special functions. Below are a few examples: ⊞ + Tab (Activates next Taskbar button) ⊞ + E (Explores My Computer) ⊞ + F (Finds Document) ⊞ + M (Minimizes All) Shift + ⊞ + M (Undoes Minimize All) ⊞ + R (Displays Run dialog box)
Application key	Opens the application's context menu (same as right-click).

Hotkeys



The computer uses hotkeys or key combinations to perform functions such as controlling the screen brightness and specifying where to display output.

HotKey	Function	Description
Fn-F1	Hotkey help	Displays a list of the hotkeys and their functions.
Fn-F2	Sleep	Puts the computer in Sleep mode, which can be defined via the Advanced tab of the Power Options Control Panel.
Fn-F3	Display toggle	Switches display output between the display screen, external monitor (if connected) and both the display screen and external monitor.
Fn-F4	Screen blank	Turns the display screen backlight off to save power. Press any key to return.
Fn-F5	Speaker on/off	Turns the speakers on/off.
Fn-→	Brightness up	Increases the screen brightness.
Fn-←	Brightness down	Decreases the screen brightness.

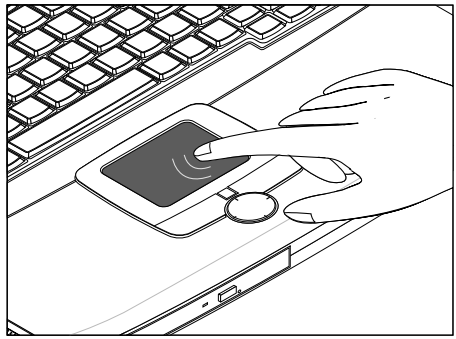
When activating hotkeys, press and hold the **Fn** key before pressing the other key in the hotkey combination.

Keyboard ergonomics

Located below the keyboard, the wide and curved palm rest is ergonomically designed to provide you with a very comfortable place to rest your hands while you type.

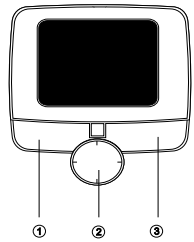
Touchpad

The built-in touchpad is a PS/2-compatible pointing device that senses movement on its surface. This means the cursor responds as you move your finger on the surface of the touchpad. The central location on the palm rest provides optimum comfort and support.



Touchpad basics

The following teaches you how to use the touchpad:



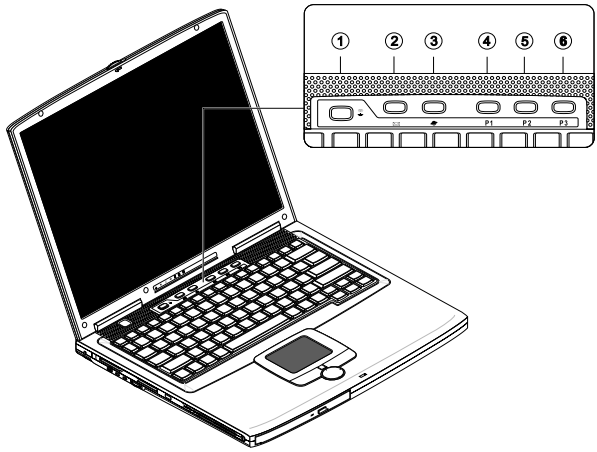
- Move your finger across the touchpad to move the cursor.
- Press the left (1) and right (2) buttons located on the edge of the touchpad to do selection and execution functions. These two buttons are similar to the left and right buttons on a mouse. Tapping on the touchpad produces similar results.
- Press the 4-direction scroll pad to move through a page or window as you would pressing the up/down and left/right scrollbars.

Function	Left Button	Right Button	Scroll Pad	Tap
Execute	Click twice quickly.		Click twice quickly.	Tap twice (at the same speed as double-clicking the mouse button).
Select	Click once.		Click once.	Tap once.
Drag	Click and hold, then use finger to drag the cursor on the touchpad.		Click and hold, then use finger to drag the cursor on the touchpad.	Tap twice (at the same speed as double-clicking the mouse button) and hold finger to the touchpad on the second tap to drag the cursor.
Access context menu		Click once.		
Scroll			Click up/ down/left/ right to scroll in that direction.	

Note: Keep your fingers dry and clean when using the touchpad. Also keep the touchpad dry and clean. The touchpad is sensitive to finger movements. Hence, the lighter the touch, the better the response. Tapping too hard will not increase the touchpad's responsiveness.

Easy Launch Keys

Located above the keyboard are Easy Launch Keys that perform various functions. You can set them to launch frequently-used programs.



#	Item	Icon	Description
1	Wireless LAN		Turns the wireless LAN feature on and off. (option)
2	Email		By default, is used to launch the email application; lights when incoming email is received.
3	Internet browser		By default, is used to launch the internet browser application.
4	P1	P1	User-configurable
5	P2	P2	User-configurable
6	P3	P3	User-configurable

To configure the Easy Launch Keys, see “Launch Manager” on page 68.

Storage

This computer's all-in-one design gives you the benefit of using the following media storage options:

- High-capacity Enhanced-IDE hard disk
- 3.5-inch floppy drive
- Media bay (high-speed optical drive or 2nd storage option)

Hard disk

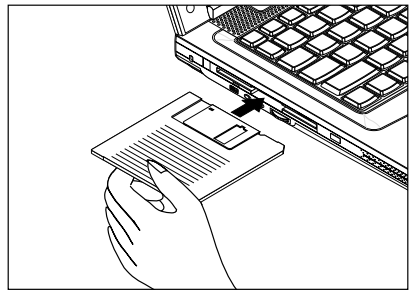
The hard disk is where your computer stores your application programs and data. The hard disk can be upgraded when you need more storage space. Consult your dealer for details.

Floppy drive

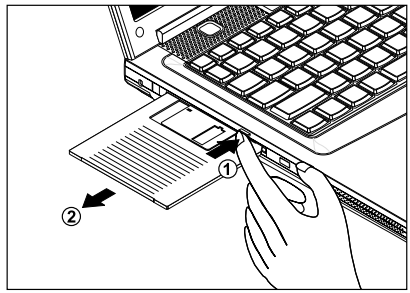
The floppy drive reads and writes on standard 3.5-inch diskettes.

Inserting and ejecting a floppy disk

Insert a floppy disk (diskette) into the floppy drive. The eject button pops out.



To eject a floppy disk from the floppy drive, press the floppy disk eject button (1); then pull out the floppy disk from the floppy drive.



Media bay

The Media bay accepts a wide variety of drive modules. These include:

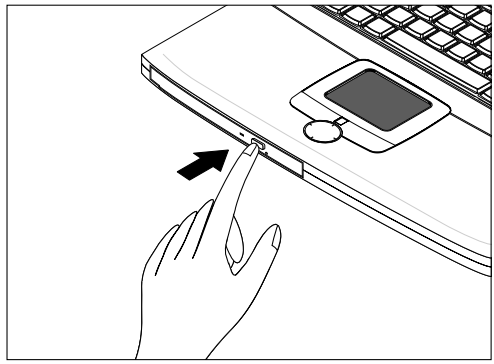
- CD-ROM drive
- DVD-ROM drive
- CD-RW drive
- DVD/CD-RW drive
- Secondary hard disk

A high-speed optical drive (CD or DVD drive) gives you portable multimedia access. You can play and listen to music CDs. You can also watch DVD movies if your computer comes with a DVD drive. You can even burn CDs if your computer comes with a CD-RW drive.

To swap Media bay drive modules, see “Media bay” on page 52.

Ejecting the optical drive tray

To eject the optical drive tray when the computer is on, press the eject button. Then pull out the drive tray to insert a CD or DVD.



Note: When the power is off, you can eject the optical drive tray using the emergency eject hole. See page 82 for details.

Playing DVD movies

When a DVD drive is installed in the Media bay, you can play DVD movies on your computer.

1 Eject the DVD tray and insert a DVD movie disc; then close the DVD tray.

Important! When you launch the DVD player for the first time, the program asks you to input the region code. DVD movies are divided into 6 regions. Once your DVD drive is set to a region code, it will play DVD movies of that region only. You can set the region code a maximum of five times (including the first time), afterwhich the last region code set will remain permanent. Recovering your hard disk does not reset the number of times the region code has been set. Refer to the table below for DVD movie region code information.

Region code	Country or region
1	U.S.A, Canada
2	Europe, Middle East, South Africa, Japan
3	Southeast Asia, Taiwan, Korea (South)
4	Latin America, Australia, New Zealand
5	Former U.S.S.R, parts of Africa, India
6	People's Republic of China

2 The DVD movie playback application will begin playing back the DVD movie.

Note: To change the region code, insert a DVD movie of a different region into the DVD drive. Please refer to the online help for more information.

Recording CDs

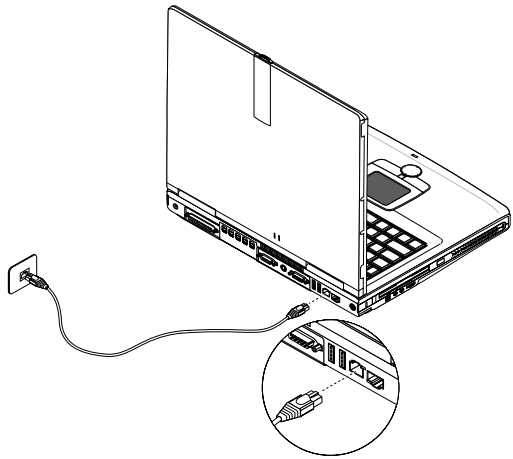
When a CD-RW drive is installed in the Media bay, you can write (or burn) CDs on your computer. You will need blank CD-Recordables (CD-R) or CD-ReWritables (CD-RW). CD-R are write-once media; CD-RW can be written to many times. Please refer to the CD recording software for more details.

Connectivity options

The computer has built-in features for connecting to a network and communicating with other computers.

Ethernet and LAN

The built-in network feature allows you to connect your computer to an Ethernet-based (10/100 Mbps) network. To use the network feature, connect an Ethernet cable from the network jack on the rear of the computer to a network jack or hub on your network.

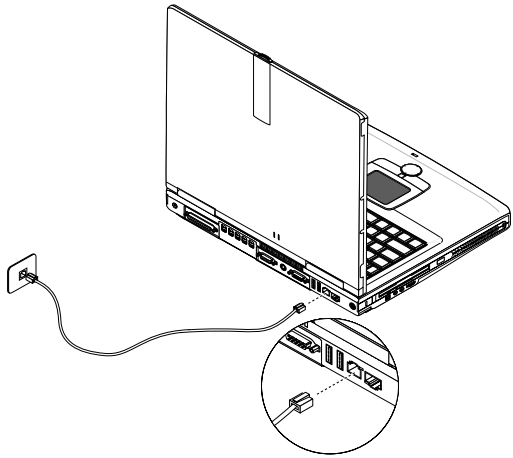


Fax/data modem

The computer has a built-in fax/data modem.

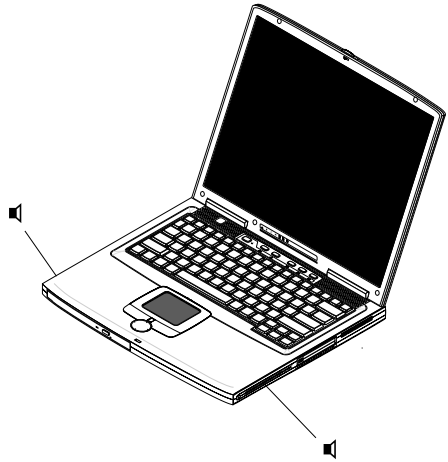
Warning: This modem port is not compatible with digital phone lines. Plugging this modem into a digital phone line will damage the modem.

To use the fax/data modem port, connect a phone cable from the modem port to a telephone jack.



Audio

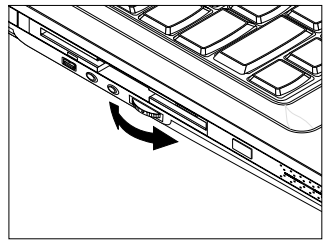
Your computer includes 16-bit high-fidelity stereo audio and outputs sound via two speakers located located near the front of the computer.



There are audio ports on the left side of the computer. For information on how to connect external audio devices to these ports, see “Audio devices” on page 47.

Adjusting the volume

Use the volume control knob to adjust the volume level. Turn the knob towards you to increase the volume; turn it away from you to decrease the volume.

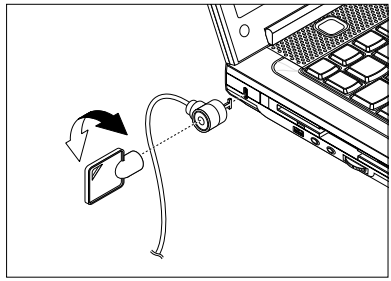


Securing your computer

Security features include hardware and software locks — a security notch and a password.

Security notch

A security notch located on the left side of the computer lets you connect a Kensington-compatible computer security lock.



Wrap a computer security lock cable around an immovable object such as a table or locked drawer handle. Insert the lock into the notch and turn the key to secure the lock. Some keyless models are available.

Passwords

Passwords can protect your computer and the BIOS Utility from unauthorized access. When set with appropriate options enabled, no one can access the computer without entering the correct password.

See “BIOS Utility” on page 69 for details on how to set a password and related options.

Important! Do not forget your password! If you forget your password, you need to contact your dealer.

2 Operating on battery power

The computer operates on AC or battery power. This chapter contains the information you need to know to operate the computer on battery power. It also includes information on how your computer manages and saves power.

Battery pack

The computer uses a battery pack that gives you long use between charges.

Battery pack characteristics

The battery pack has the following characteristics:

- Employs current battery technology standards
- Battery-low warning

Whenever possible, use the AC adapter. The battery will come in handy when you travel or during a power failure. It is advisable to have an extra fully-charged battery pack available as backup. See your dealer for more details.

Maximizing battery life

Notebook computer batteries, like all other batteries, are "consumables". This means that their use is consumed over a period of time, and that their performance diminishes over this life cycle. In order to maximize the length of your battery's life, please read and adhere to the recommendations set out below.

Conditioning a new battery pack

When using a battery pack for the first time, there is a “conditioning” process that should be followed first before using it with your computer.

1. Insert the battery into the computer. Do not turn the computer on.
2. Connect the AC adapter to a power source (i.e., a power outlet) and to the computer and fully recharge the battery.
3. Disconnect the adapter from the power source.
4. Use the computer on battery power. Do not plug in AC power during this initial use period.
5. Once the battery is fully depleted of charge while being used (i.e., the computer warns you to “switch to AC power”), turn the computer off and follow step 1 again.

Note: Repeat these steps two times. Total conditioning process is 3 charges/ discharges.

Use this process with a new battery or with a battery that's been stored without being used for a long time. If the computer is to be stored for more than two weeks, we suggest you remove the battery pack.

Warning! Do not expose battery packs to temperatures below 0ºC (32ºF) or above 60ºC (140ºF). This may adversely affect the battery pack.

By following this process you will have conditioned your battery to accept the maximum charge possible. Failure to follow this procedure will not allow you to get the longest possible battery charge from your battery and will also shorten the effective lifespan of your battery.

The useful life span of the battery is adversely affected by the following usage patterns:

- Using the computer on constant AC power, while the battery is inserted in the notebook. If you are to use the computer on AC power constantly, please remove the battery from the unit after it is fully charged.
- Not discharging/recharging the battery to its extremes as explained in "Conditioning a new battery pack" above.
- Frequency of use (the more you use the battery, the faster it will reach the end of its effective life cycle). A standard computer battery has a life span of about 500 charges.

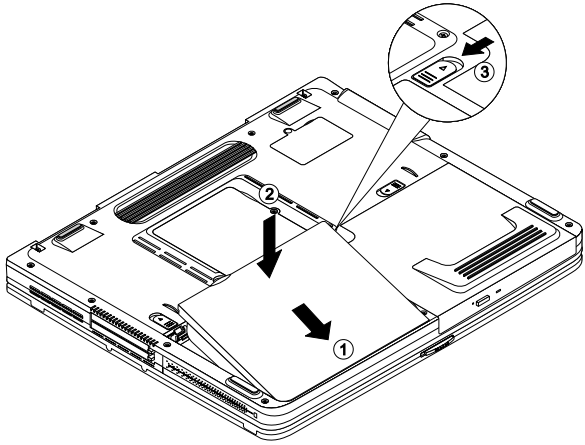
Installing and removing the battery pack

Important! Before removing the battery pack, make sure that you have an AC adapter connected to the computer; otherwise, turn off the computer.

To install a battery pack:

1. Insert the battery pack into the battery bay, front-end first.
2. Press down on the battery pack until you hear the battery latches click in place.

3 Slide the battery lock to lock position.



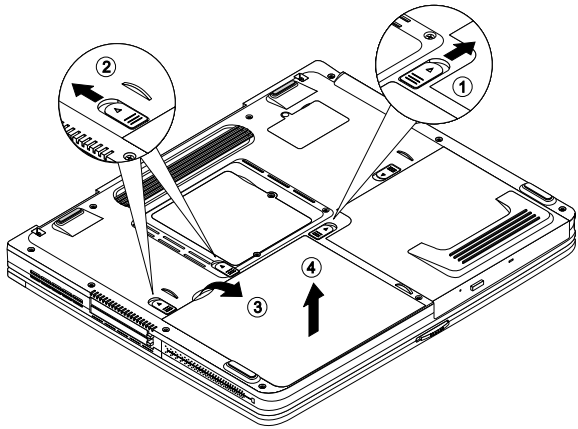
To remove the battery pack:

1 Slide the battery lock to the unlock position.

2 Slide and hold the battery release latches.

3 Flip up the battery pack.

4 Pull up the battery pack to remove it.



Charging the battery

To charge the battery, slide the battery pack into the battery bay and plug the AC adapter into the computer and an electrical outlet.

Charging modes

The adapter has two charging modes:

- Rapid mode

  The computer uses rapid charging when power is turned off and a powered AC adapter is connected to it. In rapid mode, a fully depleted battery gets fully charged in approximately 3 hours.

- Charge-in-use mode

  When the computer is in use with the AC adapter plugged in, the computer also charges the battery pack if installed. This mode will take longer to fully charge a battery than rapid mode. In charge-in-use mode, a fully depleted battery gets fully charged in approximately 4.5 hours.

Note: We suggest that you charge the battery pack before retiring for the day, letting it charge overnight before traveling. This ensures a fully charged battery for use the next day.

Checking the battery level

The Windows battery meter indicates the present battery level. Simply rest your cursor on the battery meter (or AC plug) icon on the taskbar to see the present charge level of your battery.

Optimizing battery life

This section helps you get the most out of battery operation. Optimizing battery life prolongs the charge/recharge cycle and improves recharge efficiency. Follow these suggestions to optimize and maximize battery power:

- Purchase an extra battery pack.
- Use the AC adapter whenever possible so that the battery is reserved for on-the-go computing.
- Keep the battery pack in the computer powered by the AC adapter. The constant trickle charge maintains the battery level to eliminate the battery

self-discharge effect. The charge-in-use function also charges the battery pack.

- Disable the parallel port if no devices are connected to this port. You can do this through the BIOS Setup Utility. See “Onboard Devices Configuration” on page 74.
- Eject the PC Card from the slot when it is not in use, since the PC Card draws extra power. See “Ejecting a card” on page 49.
- Store the battery pack in a cool, dry place. The recommended storage temperature for battery packs ranges from 10 to 30 degrees Celsius. The higher the storage temperature, the faster the battery pack self-discharges.
- The batteries can be recharged about 400 times when used as directed. Excessive recharging decreases battery life.
- Take care of your battery pack and AC adapter. See “Taking care of your computer” on page v of the preface.

Battery-low warning

You never have to worry about battery power as long as you are using the AC adapter. However, when you operate the computer on battery power, pay attention to the Windows battery meter and the Power status indicator below the display screen.

Warning! Connect the AC adapter to the computer as soon as possible. Data is lost when computer power is cut off during Standby mode.

The following table shows the recommended course of action to take when you encounter a battery-low condition.

Situation	Recommended Action
AC adapter and power outlet available	1. Connect the AC adapter to the computer. 2. Save all necessary files. 3. Resume work. Power off the computer if you wish to recharge the battery rapidly.

Situation	Recommended Action
An extra fully-charged battery pack available	1. Save all necessary files. 2. Exit the application. 3. Power off the computer. 4. Replace the battery pack. 5. Power on the computer and resume work.
AC adapter or power outlet not available	1. Save all necessary files. 2. Exit the application. 3. Power off the computer.

Power management

This computer has a built-in power management unit that monitors system activity. System activity refers to any activity involving one or more of the following devices: keyboard, mouse, floppy drive, hard disk, peripherals connected to the serial and parallel ports, and video memory. If no activity is detected for a period of time (called an inactivity timeout), the computer stops some or all of these devices in order to conserve energy.

This computer employs a power management scheme that supports ACPI (Advanced Configuration and Power Interface) which allows for maximum power conservation and maximum performance at the same time. ACPI enables Windows to control the amount of power given to each device attached to the computer. Windows handles all power-saving chores for your computer. For more information, refer to Windows help.

3 Peripherals and options

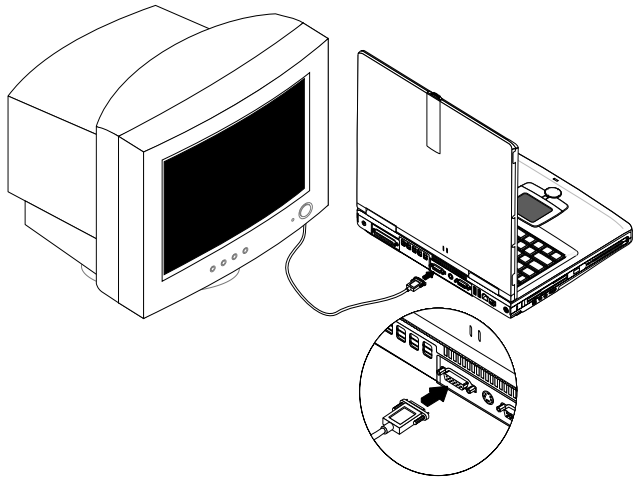
Your computer offers excellent expansion capabilities with its built-in ports and connectors. This chapter describes how to connect peripherals and hardware options that help you use your computer with ease. When connecting peripherals, read the manual included with the peripheral for operating instructions. You can purchase most of these and other options directly from authorized dealers.

This chapter also includes sections on how to upgrade key components. Key component upgradeability helps keep your computer in step with the latest technology.

External display devices

External monitor

You can connect an external monitor to the external display port.

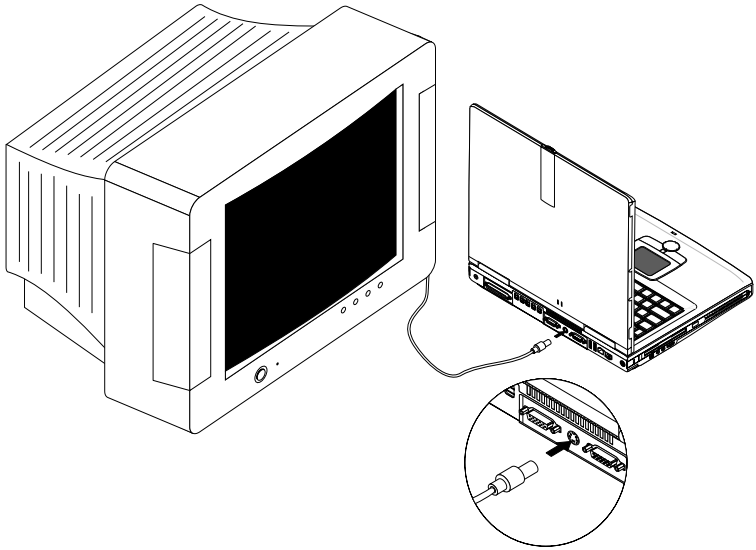


Read the monitor manual for additional instructions.

Note: If an external monitor is not connected, closing the display cover puts the computer into Standby mode.

External display with s-video input

You can connect an external display device such as a television or projector with s-video input to the video-out port on the rear of the computer.



Read the manual for your TV or projector for additional operating instructions.

Using simultaneous display

Your computer takes advantage of Windows multi-display capability, allowing you to use your computer for presentation purposes. So whatever is displayed in your computer will likewise be displayed on the other external display. Press **Fn-F3** to toggle the display output location.

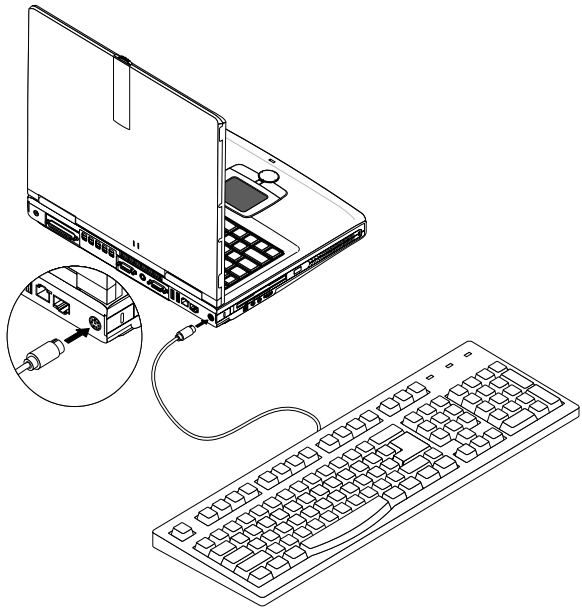
To use simultaneous display, you can choose to connect the display device to the computer through the external display port or video-out port, depending on what your display device supports.

External input devices

External keyboard

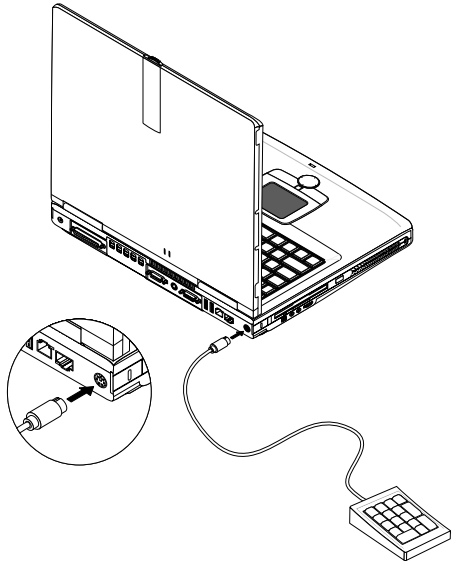
This computer has a keyboard with full-sized keys and an embedded keypad. If you feel more comfortable using a desktop keyboard, you can connect an external PS/2-compatible or USB keyboard.

Plug a PS/2 keyboard into the PS/2 port (shown below); plug the USB keyboard to an available USB port.



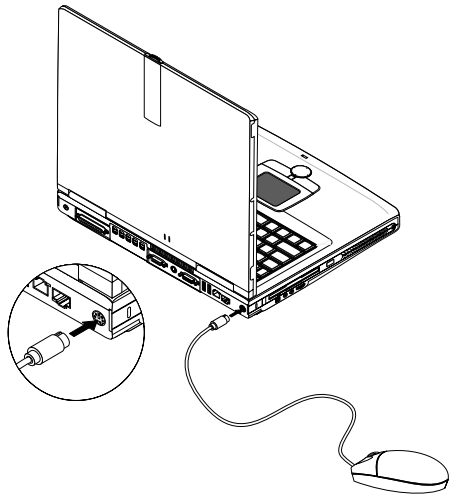
External keypad

You can also use a 17-key numeric keypad for number-sensitive, data-entry applications. To connect the keypad, plug the keypad connector into the PS/2 port (shown below) or USB port depending on what your device supports.



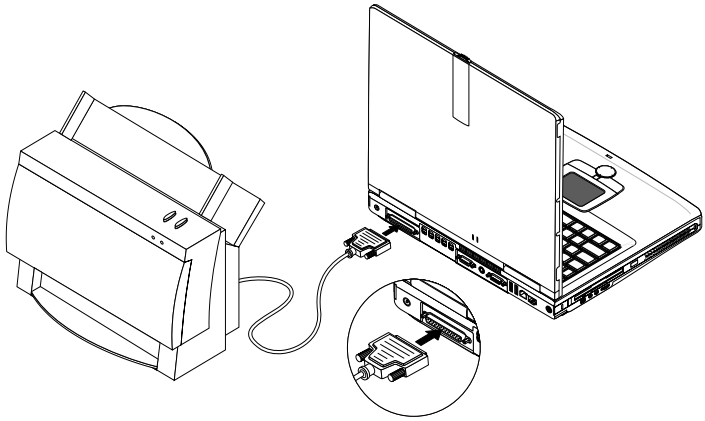
External pointing device

This computer accepts either a PS/2-compatible or USB mouse or similar pointing device. To use a PS/2-compatible mouse, simply plug it into the PS/2 port (shown below). If you use a USB mouse, connect it to an available USB port.



Printer

This computer supports both parallel and USB printers. For a parallel printer, plug the printer cable into the parallel port (shown below). For a USB printer, connect it to the USB port.

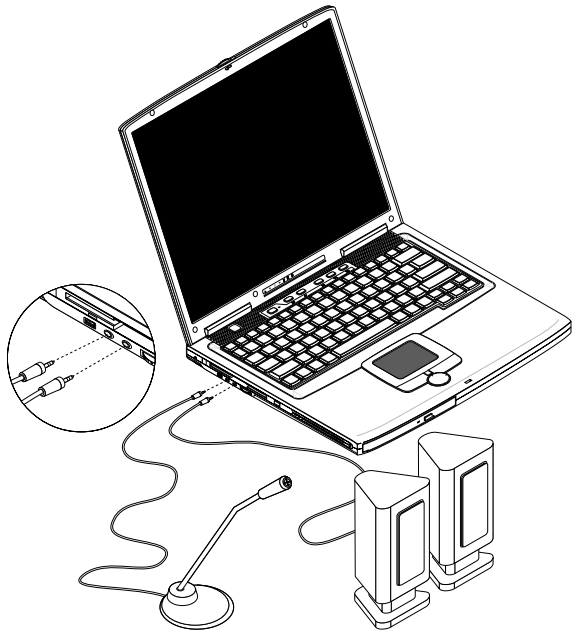


To operate your printer, see your printer manual.

Note: If the printer does not function, enter the BIOS Setup Utility and verify that the parallel port is enabled. See “Onboard Devices Configuration” on page 74 for assistance.

Audio devices

You can plug an external microphone or an audio line-in device into the audio line-in/microphone-in jack. Amplified speakers or headphones connect to the speaker/ headphone-out jack.



Expansion devices

PC Card slots

The computer has built-in CardBus PC Card slots that can accommodate one type III or two type II/I PC Cards. Please consult your dealer for PC Card options available that you can purchase for your computer.

The PC Card slots found on the right of the computer accepts credit-card-sized cards that enhance the usability and expandability of the computer.

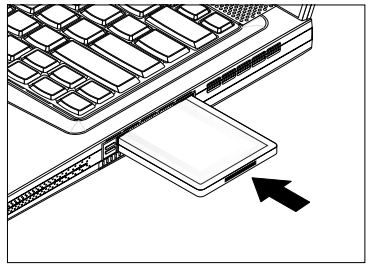
PC Cards (formerly PCMCIA) are add-on cards for portable computers, giving you expansion possibilities long afforded by desktop PCs. Popular type II cards include flash memory, SRAM, fax/data modem, LAN and SCSI cards. CardBus improves on the 16-bit PC Card technology by expanding the data path to 32 bits.

Note: Refer to your card's manual for details on how to install and use the card and its functions.

Inserting a card

Note: Insert a type III PC Card in the lower slot.

Insert the card into the appropriate slot and make the proper connections (e.g., cable), if necessary. See your card manual for details.

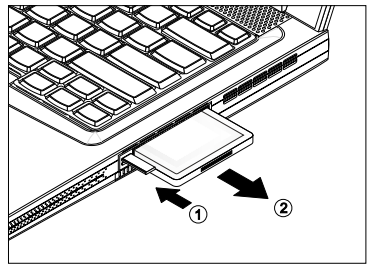


Ejecting a card

Before ejecting a PC Card:

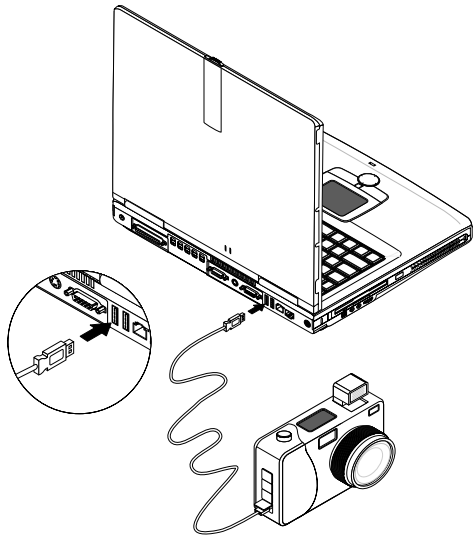
- Exit the application using the card.
- Left-click on the Safely Remove Hardware icon on the taskbar and click on the safely remove card operation.

After it is safe to remove the card, press the slot eject button once to pop it out (1); then press it again to eject the PC Card (2).



USB

The computer has two USB (Universal Serial Bus) ports that allow you to connect peripherals without occupying too many resources. USB devices are also plug and play which means you don't need to turn off your computer to connect and use the device. Common USB devices include the mouse, keyboard, and digital cameras. You can also daisy-chain USB devices via USB hubs.



Disconnecting USB devices

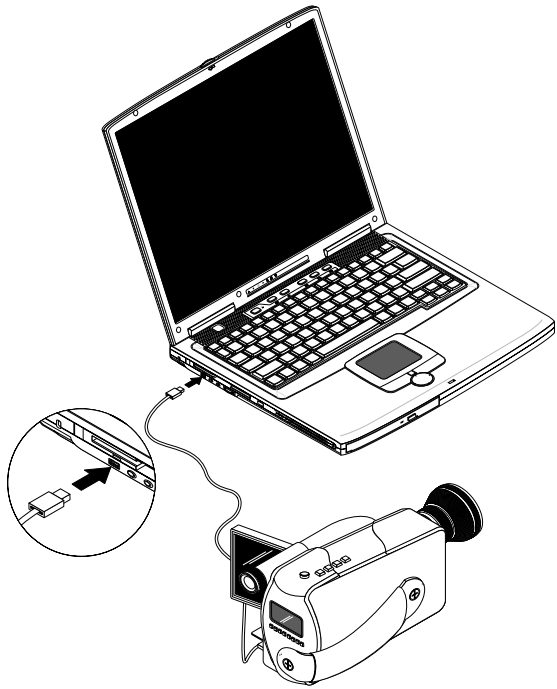
Before disconnecting a USB device:

- Stop all applications using the USB device.
- Left-click on the Safely Remove Hardware icon on the taskbar and click on the safely remove device operation.

Now you can unplug the USB device from the computer.

IEEE 1394

The computer's fast IEEE 1394 port allows you to connect IEEE 1394 supported devices like a digital camcorder, external hard disks, or external CD burners. You can also daisy-chain IEEE 1394 devices via a IEEE 1394 repeater.



Disconnecting IEEE 1394 devices

Before disconnecting a IEEE 1394 device:

- Stop all applications using the IEEE 1394 device.
- Left-click on the Safely Remove Hardware icon on the taskbar and click on the safely remove device operation.

Now you can unplug the IEEE 1394 device from the computer.

Media bay

The Media bay accepts a wide range of removable modules that provide you with optical media access as well as a secondary storage option.

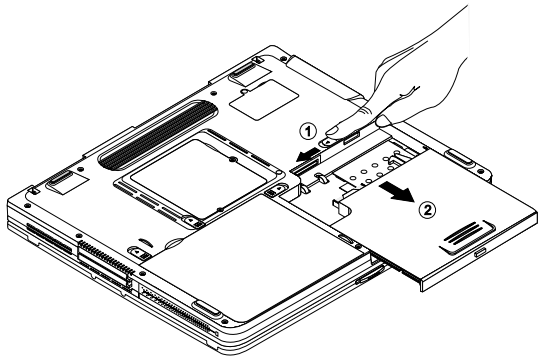
Swapping Media bay modules

To swap Media bay modules, do as follows:

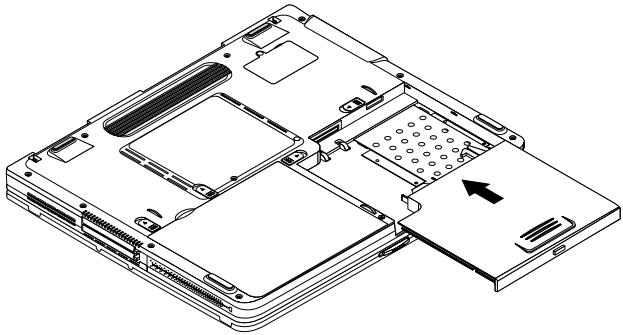
Important! Before swapping Media bay modules, shut down and turn off the computer first.

1 Slide and hold the Media bay release latch.

2 Pull out the Media bay along its guides.



3 Insert a replacement Media bay module.



The Media bay release latch locks in place. You can now resume using the computer with the new Media bay module.

Miscellaneous options

Battery pack

It is a good practice to have a spare battery around, especially when you travel. The Li-ion battery, coupled with the power management features of your computer, supplies you with more power on-the-go.

AC adapter

The compact AC adapter charges your battery pack and supplies power to your computer. You can order a spare AC adapter so you do not need to carry it from the office to your home or destination.

Key component upgrades

Your computer delivers superior power and performance. However, some users and the applications they use may demand more. This computer allows you to upgrade key components when you need increased performance.

Note: Contact your authorized dealer if you decide to perform a key component upgrade.

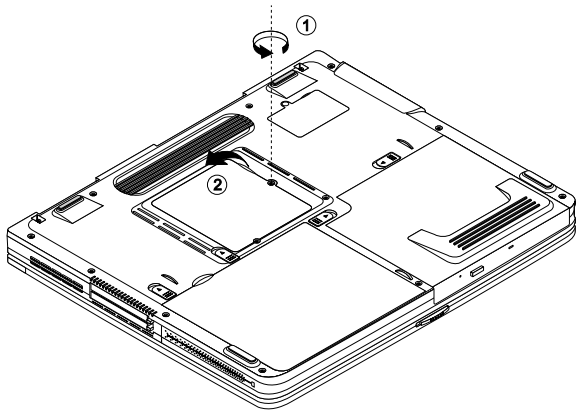
Memory upgrade

This notebook computer comes with two memory slots that accept soDIMMs (Small Outline Dual Inline Memory Modules). It supports DDR (Double Data Rate) Synchronous Dynamic Random Access Memory (SDRAM).

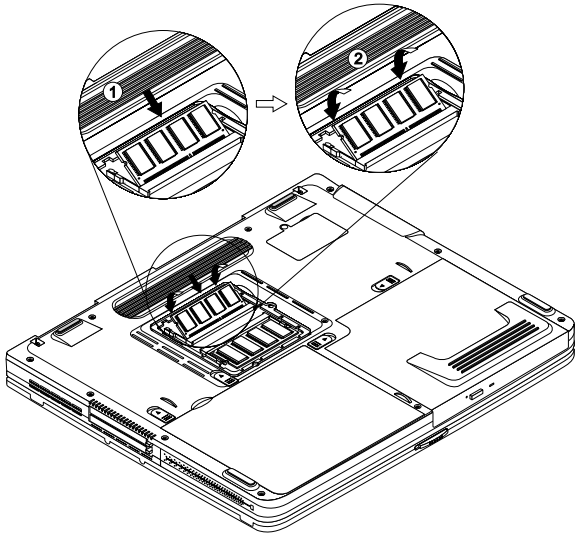
Installing memory

Follow these steps to install memory:

1. Turn off the computer, unplug the AC adapter (if connected) and remove the battery pack. Then turn the computer over to access its base.
2. Remove the screw from the memory door (1), then flip out and lift the memory door (2) to access the memory slot.



3 Insert the memory module diagonally into the slot (1), then gently press down until it clicks into place (2).



4 Replace the memory door and secure it with the screw.

After restarting the computer, the system automatically detects and reconfigures the total memory size.

Hard disk upgrade

It is possible to upgrade your hard disk with a higher capacity drive when you need more storage space. The computer uses a 9.5mm 2.5-inch Enhanced-IDE hard disk. Please consult your dealer if you need to upgrade your hard disk.

4 Moving with your computer

This chapter gives you tips and hints on things to consider when moving around or traveling with your computer.

Disconnecting from the desktop

Follow these steps to disconnect your computer from external accessories:

1. Save your work in progress.
2. Shut down the operating system.
3. Turn off the computer.
4. Disconnect the cord from the AC adapter.
5. Disconnect the keyboard, pointing device, printer, external monitor, and other external devices.
6. Disconnect the Kensington lock if you are using one to secure the computer.

Moving around

when you are just moving within short distances, for example, from your office desk to a meeting room

Preparing the computer

Before moving the computer, close and latch the display cover to place it in Standby mode. You can now safely take the computer anywhere you go within the building.

To bring the computer out of Standby mode, open the display and press the power button.

What to bring to short meetings

A fully charged battery runs the computer for 2 hours under most circumstances. If your meeting is shorter than that, you probably do not need to bring anything with you other than the computer.

What to bring to long meetings

If your meeting will last longer than 2 hours or if your battery is not fully charged, you may want to bring the AC adapter with you to plug in your computer in the meeting room.

If the meeting room does not have an electrical outlet, reduce the drain on the battery by putting the computer in power-saving mode. Close the display cover whenever you are not actively using the computer. Open the display and press the power button to resume.

Taking the computer home

when you are moving from your office to your home or vice versa

Preparing the computer

After disconnecting the computer from your desktop, follow these steps to prepare the computer for the trip home:

1 Remove all media from the drives. Failure to remove the media can damage the drive head.

2 Pack the computer in a protective case that can prevent the computer from sliding around and cushion it if it should fall.

Caution: Avoid packing items next to the top cover of the computer. Pressure against the top cover could damage the screen.

What to bring with you

Unless you already have some items at home, bring the following items with you:

- AC adapter and power cord
- Media bay module(s)
- The printed user's manual

Special considerations

Follow these guidelines to protect your computer while traveling to and from work:

- Minimize the effect of temperature changes by keeping the computer with you.
- If you need to stop for an extended period of time and cannot bring the computer with you, leave the computer in the trunk of the car to avoid exposing the computer to excessive heat.
- Changes in temperature and humidity can cause condensation. Allow the computer to return to room temperature, and inspect the screen for condensation before turning on the computer. If the temperature change is greater than 18°F (10°C), allow the computer to come to room temperature slowly. If possible, leave the computer for 30 minutes in an environment with

a temperature between outside and room temperature.

Setting up a home office

If you frequently work on your computer at home, it may be worthwhile to purchase a second AC adapter for use at home. With a second AC adapter, you can avoid transporting the extra weight to and from home.

If you use your computer at home for significant periods of time, you might also want to add an external keyboard, monitor, or mouse.

Traveling with the computer

when you are moving within a larger distance, for instance, from your office building to a client's office building or traveling locally

Preparing the computer

Prepare the computer as if you were taking it home. Be sure the battery in the computer is charged. Airport security may require you to turn on your computer when bringing it into the gate area.

What to bring with you

Bring the following items with you:

- AC adapter
- Spare, fully charged battery packs
- Media bay module(s)
- Additional printer driver files if you plan to use another printer

Special considerations

In addition to the guidelines for taking the computer home, follow these guidelines to protect your computer while traveling:

- Always take the computer as carry-on luggage.
- If possible, have the computer inspected by hand. The computer can safely pass through security X-ray machines, but never expose the computer to a metal detector.
- Avoid exposing floppy disks to hand-held metal detectors.

Traveling internationally with the computer

when you are moving from country to country

Preparing the computer

Prepare the computer as you would normally prepare it for traveling.

What to bring with you

Bring the following items with you.

- AC adapter
- Power cords that are appropriate to the country to which you are traveling
- Spare, fully charged battery packs
- Media bay module(s)
- Additional printer driver files if you plan to use another printer

Special considerations

Follow the same special considerations as when traveling with the computer. In addition, these tips are useful when traveling internationally.

- When traveling in another country, check that the local AC voltage and the AC adapter power cord specifications are compatible. If not, purchase a power cord that is compatible with the local AC voltage (e.g., power rating). Do not use converter kits sold for appliances to power the computer.
- If you are using the modem, check if the modem and connector is compatible with the telecom system of the country you are traveling in.

5 Software

This chapter discusses the important system utilities bundled with your computer.

System software

The computer comes preloaded with the following software:

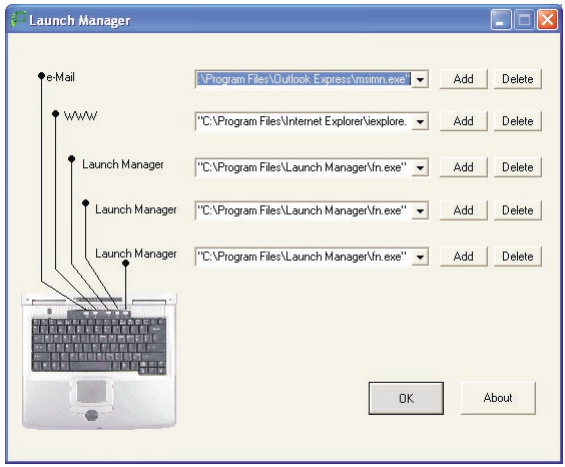
- Microsoft Windows operating system
- Hardware BIOS setup utility
- System utilities, drivers and application software

Note: To access Windows software applications, click on the Start button and select the application folder. Then click on the application icon to run the selected application. To learn about the software and utility, make use of the online help provided by the software.

Launch Manager

Launch Manager allows you to set the Easy Launch Keys located above the keyboard. See “Easy Launch Keys” on page 22 for the location and description of these keys.

To access this program, click **Start**, **All Programs**, **Launch Manager**, then click **Launch Manager**.



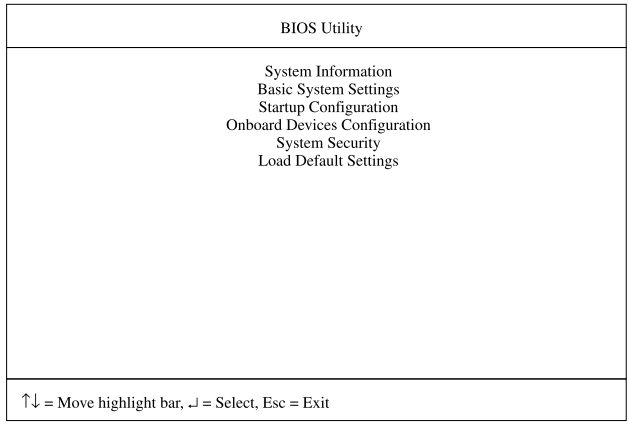
Click **Add** to assign a desired application to the launch key; click **Delete** to clear the launch key assignment.

BIOS Utility

The BIOS Utility is a hardware configuration program built into your computer's BIOS (basic input/ouput system).

Your computer is already properly configured and optimized, and you do not need to run this utility. However, if you encounter configuration problems, you may need to run it. Please also refer to Chapter 6, Troubleshooting when a problem arises.

To activate the BIOS Utility, press **F2** during POST.



Navigating the BIOS Utility

There are six menu options: System Information, Basic System Settings, Startup Configuration, Onboard Devices Configuration, System Security and Load Default Settings.

To enter a menu, highlight the item using the cursor up/down keys (↑↓) keys; then press **Enter**.

While in a menu, follow these instructions:

- Press the cursor up/down keys (↑↓) to move between parameters.
- Press the cursor left/right keys (← →) to change the value of a parameter.
- Press **Esc** while you are in any of the menu options to return to the main menu.

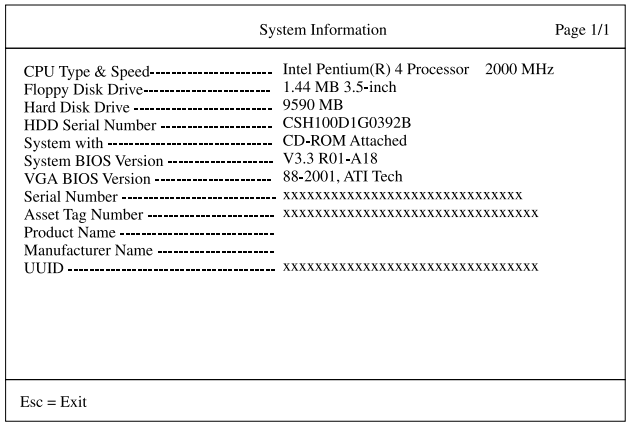
Notes:

You can change the value of a parameter if it is enclosed in square brackets.

Navigation keys for a particular menu are shown on the bottom of the screen.

System Information

The System Information screen displays a summary of your computer hardware information.



Note: The screen above is for reference only. Actual values may differ.

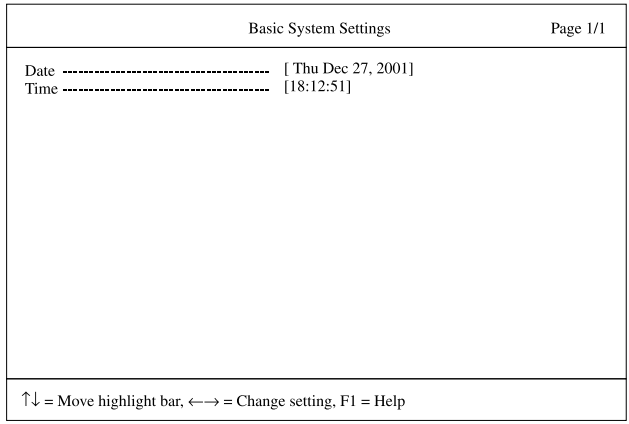
The table below describes the parameters in this screen.

Parameter	Description
CPU Type & Speed	Describes the type of CPU installed in the system.
Floppy Disk Drive	Shows the floppy drive type.
Hard Disk Drive	Shows the hard disk size.
HDD Serial Number	Shows the serial number of the hard disk.

Parameter	Description
System with	Shows the Media bay drive type installed.
System BIOS Version	Shows the system BIOS version.
VGA BIOS Version	Shows the VGA BIOS version.
Serial Number	Displays the serial number of your computer.
Asset Tag Number	Displays the asset tag number of your computer.
Product Name	Shows the product name.
Manufacturer Name	Shows the manufacturer name.
UUID	Shows the Universal Unique Identifier number for your computer.

Basic System Settings

The Basic System Settings screen contains parameters involving basic computer settings such as the system date and time.

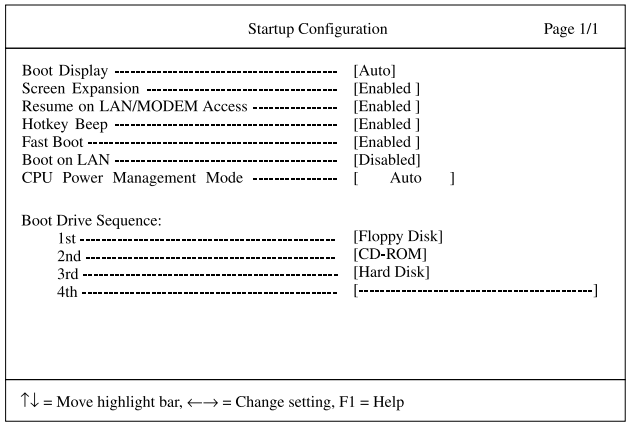


The table below describes the parameters in this screen.

Parameter	Description
Date	Sets the system date. Format: WWW MM DD, YYYY (day-of-the-week month day, year)
Time	Sets the system time. Format: HH:MM:SS (hour:minute:second)

Startup Configuration

The Startup Configuration screen contains parameters that help determine how your computer behaves at startup.


Startup Configuration
Page 1/1
Boot Display [Auto]
Screen Expansion [Enabled]
Resume on LAN/MODEM Access [Enabled]
Hotkey Beep [Enabled]
Fast Boot [Enabled]
Boot on LAN [Disabled]
CPU Power Management Mode [Auto]
Boot Drive Sequence:
1st [Floppy Disk]
2nd [CD-ROM]
3rd [Hard Disk]
4th [ ]
↑↓ = Move highlight bar, ←→ = Change setting, F1 = Help

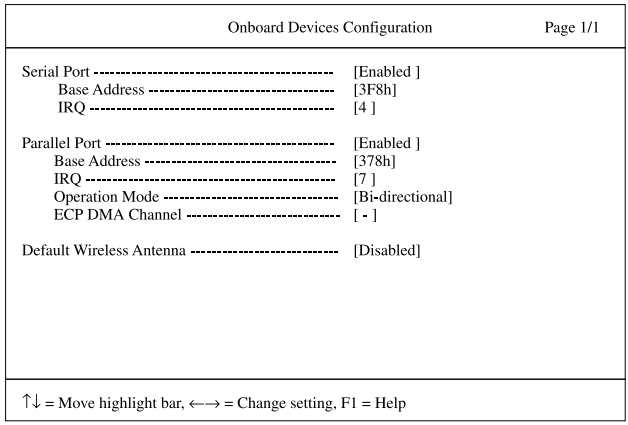
The table below describes these devices. Settings in **boldface** are the default and suggested parameter settings.

Parameter	Description
Boot Display	Sets which display to use on boot-up. When set to Auto, the computer automatically determines the display device. If an external display device (e.g., monitor) is connected, it becomes the boot display; otherwise, the computer LCD is the boot display. When set to Both, the computer outputs to both the computer LCD and an external display device if one is connected. Options: Auto or **Both**

Parameter	Description
Screen Expansion	When enabled, the screen will automatically adjust the display to fit the screen when the resolution is set lower than the native resolution of the computer LCD. Options: **Enabled** or Disabled
Resume on LAN/MODEM Access	When enabled, the computer will wake up from Sleep mode when LAN or modem access occurs. Options: **Enabled** or Disabled
Hotkey Beep	When enabled, the computer gives off a beep when a hotkey is pressed. See “Hotkeys” on page 18 for more information. Options: **Enabled** or Disabled
Fast Boot	Allows you to define your system’s boot-up process, whether to skip some startup POST routines or proceed with the normal boot-up process. Options: **Enabled** or Disabled
Boot on LAN	When enabled, a remote host computer with an appropriate boot image can upload the image through a LAN and boot this computer. Options: Enabled or **Disabled**
CPU Power Management Mode	When set to **Auto**, allows the CPU to operate with power management. Options: **Auto** or Disabled
Boot Drive Sequence	Allows you to set the order in which the system will search for and boot from bootable images found on those drives. Priorities are set from 1 through 4. Default: Floppy Disk (1st) --> CD-ROM (2nd) --> Hard Disk (3rd)

Onboard Devices Configuration

The Onboard Devices Configuration screen contains parameters involving your hardware devices.


Onboard Devices Configuration
Page 1/1
Serial Port [Enabled]
Base Address [3F8h]
IRQ [4]
Parallel Port [Enabled]
Base Address [378h]
IRQ [7]
Operation Mode [Bi-directional]
ECP DMA Channel [-]
Default Wireless Antenna [Disabled]
↑↓ = Move highlight bar, ←→ = Change setting, F1 = Help

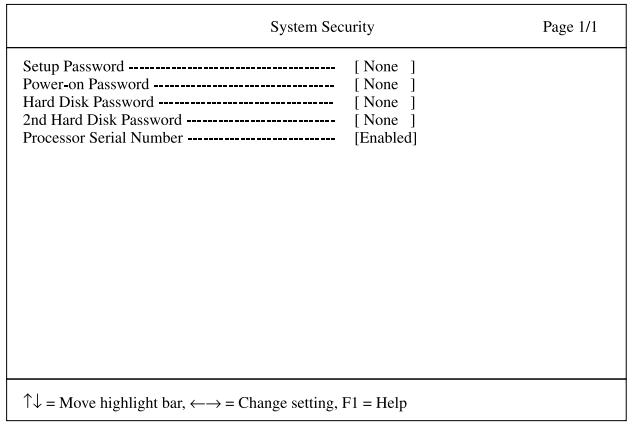
The table below describes the parameters in the screen. Settings in **boldface** are the default and suggested parameter settings.

Parameter	Description
Serial Port	Enables or disables the serial port. Options: **Enabled** or Disabled
Base Address	Sets the base I/O address of the serial port. Options: **3F8h**, 2F8h, 3E8h or 2E8h
IRQ	Sets the interrupt request of the serial port. Options: **4** or 3
Parallel Port	Enables or disables the parallel port. Options: **Enabled** or Disabled
Base Address	Sets the I/O address of the parallel port. Options: **378h**, 278h or 3BCh
IRQ	Sets the interrupt request of the parallel port. Options: **7** or 5

Parameter	Description
Operation Mode	Sets the operation mode of the parallel port. Options: **Bi-directional**, EPP, ECP or Standard
ECP DMA Channel	Sets a DMA channel for the printer to operate in ECP mode. This parameter is enabled only if Operation Mode is set to ECP. Options: 1 or 3
Default Wireless Antenna	Enables or disables the antenna for wireless communication. Options: Wirelessl LAN or **Disabled**

System Security

The System Security screen contains parameters that help safeguard and protect your computer from unauthorized use.


System Security
Page 1/1
Setup Password ---------- [None]
Power-on Password ---------- [None]
Hard Disk Password ---------- [None]
2nd Hard Disk Password ---------- [None]
Processor Serial Number ---------- [Enabled]
↑↓ = Move highlight bar, ←→ = Change setting, F1 = Help

The table below describes the parameters in this screen. Settings in boldface are the default and suggested parameter settings.

Parameter	Description
Setup Password	When set, this password protects the BIOS Utility from unauthorized entry. Options: **None** or Present

Parameter	Description
Power-on Password	When set, this password protects the computer from unauthorized access during boot-up. Options: **None** or Present
Hard Disk Password	When enabled, this password protects the hard disk from unauthorized access. Options: **None** or Present
2nd Hard Disk Password	This parameter is selectable when a 2nd hard disk is installed in the Media bay. When enabled, this password prevents the Media bay hard disk from unauthorized access. Options: **None** or Present
Processor Serial Number	The Pentium processor includes a unique serial number which allows individual CPUs to be identified. You can turn off this feature by setting this parameter to Disabled. Options: **Enabled** or Disabled

Notes:

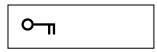
When you are prompted to enter a password, you have three tries before the system halts.

Don't forget your password. If you forget your password, you may have to return your notebook computer to your dealer to reset it.

Setting a password

Follow these steps:

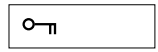
1 Use the ↑ and ↓ keys to highlight the password parameter you want to set, and press the **Enter** key. The password box appears:



2 Type a password. The password may consist of up to eight alphanumeric characters (A-Z, a-z, 0-9).

Important! Be very careful when typing your password because the characters do not appear on the screen.

3 Press Enter. The retype password box appears.

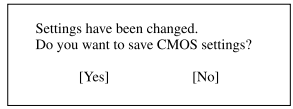


4 Retype the password to verify your first entry and press **Enter**.

After setting the password, the computer automatically sets the chosen password parameter to **Present**.

5 Press **Esc** to return to the main menu.

6 Press **Esc**. The following dialog box appears.



7 Select **Yes** and press **Enter** to save the password and exit the BIOS Utility.

Removing a password

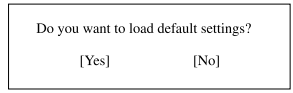
To remove a password, use the ↑ and ↓ keys to highlight the password parameter you want to remove, then press ← → key to select **None**.

Changing a password

To change a password, first remove the password (see page 77), then set a new password (see page 76).

Load Default Settings

When you select this menu item, the following dialog box displays:



To load factory-default settings for all the parameters, select **Yes** and press **Enter**. Otherwise, select **No** and press **Enter**.

6 Troubleshooting

This chapter instructs you on how to deal with common system problems. Read it before calling a technician if a problem occurs. Solutions to more serious problems require opening up the computer. Do not attempt to open and service the computer by yourself. Contact your dealer or an authorized service center for assistance.

Frequently-asked questions

This is a list of possible situations that may arise during the use of your computer, and it gives easy answers and solutions to these questions.

I press the power switch, but the computer does not start or boot-up.

Look at the Power status indicator:

- If it is not lit, no power is being applied to the computer. Check the following:
  - If you are running on battery power, it may be low and unable to power the computer. Connect the AC adapter to recharge the battery pack.
  - Make sure the AC adapter is plugged in properly to the computer and to the power outlet.
- If it is lit, check if a non-bootable (non-system) diskette is in the floppy drive. Remove or replace it with a system diskette and press Ctrl-Alt-Del to restart the system.

The operating system files may be damaged or missing. Insert the startup disk you created during Windows setup into the floppy drive and press Ctrl-Alt-Del to restart the system. This will diagnose your system and make necessary fixes.

Nothing appears on the screen.

The computer's power management system automatically blanks the screen to save power. Press any key to turn the display back on.

If pressing a key does not turn the display back on, two things might be the cause:

- The brightness level might be too low. Press **Fn-**↑ and **Fn-**↓ to adjust the brightness level.
- The display device might be set to an external monitor. Press the display toggle hot key **Fn-F5** to toggle the display back to the computer.

Image is not full-screen.

Make sure the resolution is set to a resolution your system supports natively. Right-click on your Windows desktop and select **Properties** to bring up the Display Properties dialog box. Then click on the **Settings** tab to make sure the resolution is set to the appropriate resolution. Resolutions lower than the specified resolution are not full-screen on the computer or on an external monitor.

No audio from the computer.

Check the following:

- The volume may be muted. In Windows, look at the volume control icon on the taskbar. If it is crossed-out, click on the icon and deselect the Mute option.
- The volume level may be too low. In Windows, look at the volume control icon on the taskbar. Click on the icon and adjust the level. You can also use the volume control knob on the left side of the computer to adjust the volume.

If headphones, earphones or external speakers are connected to the audio line-out jack on the computer, the internal speakers automatically turn off.

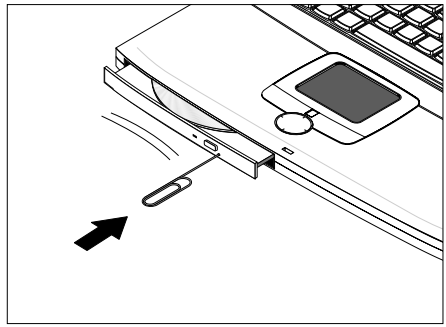
External microphone does not work.

Check the following:

- Make sure the external microphone is connected to the audio line-in jack on the computer.
- If you cannot hear playback, the speakers may be muted.

How do I eject the optical drive tray with the computer turned off?

There is a emergency eject hole on the optical drive. Simply insert the tip of a pen or paperclip and push to eject the optical drive tray.



The keyboard does not respond.

Try attaching an external PS/2 or USB keyboard to the appropriate port on the computer. If it works, contact your dealer or an authorized service center as the internal keyboard cable may be loose.

The floppy drive cannot access a diskette.

Check the following:

- Make sure the diskette is properly inserted in the floppy drive.
- Make sure the diskette is formatted.
- If the diskette is not the cause of the problem, the floppy drive may be dirty. Clean it using a drive cleaning kit. Follow the instructions included with the kit.

The CD or DVD drive cannot access a disc.

Check the following:

- Make sure the disc is supported by the drive. If your computer has a CD-ROM drive, it can read CDs but cannot read DVDs. If your computer has a DVD drive, it can read DVDs in addition to CDs.
- When placing the CD or DVD in the drive tray, make sure it is secure in the spindle on the drive tray.
- Make sure the CD or DVD is free from scratches or smudges. If the CD or DVD is dirty, clean it using a disc cleaning kit. Remember to follow the instructions included with the kit.
- If the problem does not lie with the disc, your CD or DVD drive may be dirty. Clean it using a drive cleaning kit. Follow the instructions included with the kit.

The printer does not work.

Check the following:

- Make sure that the printer is connected to a power outlet and it is turned on.
- Depending on your printer connection (USB or parallel), make sure the printer cable is connected securely to the appropriate ports on both the computer and the printer.
- If you use a parallel port, access the BIOS Setup Utility by pressing F2 after restarting your system. Go to the Others screen and verify that the parallel port is enabled. See “Onboard Devices Configuration” on page 74.

I want to set up my location to use the internal modem.

Follow these steps:

1. Click on **Start**, then click **Control Panel**.
2. Double-click on **Phone and Modem Options**.

3 In the **Dialing Rules** tab, begin setting up your location.

Refer to the Windows Help and Support and the modem manual.

Why can't I charge my battery to 100% charged when it is 99-95% charged?

To preserve the life of the battery, the system only lets you charge the battery when its capacity falls below 95%. However, it is recommended that you bring an extra battery and let the battery in the system use up its power before charging it.

Error messages

If you receive an error message, note the message and take the corrective action. The following table lists the error messages in alphabetical order together with the recommended course of action.

Note: To enter the BIOS Setup Utility, press **F2** during POST. For more information, see "BIOS Utility" on page 69.

Error Messages	Corrective Action
CMOS Battery Bad	Contact your dealer or an authorized service center.
CMOS Checksum Error	Contact your dealer or an authorized service center.
Disk Boot Failure	Insert a system (bootable) diskette into the floppy drive (A:), then press **Enter** to reboot.
Diskette Drive Controller Error or No Controller Present	Contact your dealer or an authorized service center.
Diskette Drive Error	Contact your dealer or an authorized service center.
Diskette Drive Type Mismatch	Press **F2** (during POST) to enter the BIOS Utility; then press **Esc** to exit and reconfigure the computer.
Equipment Configuration Error	Press **F2** (during POST) to enter the BIOS Utility; then press **Esc** to exit and reconfigure the computer.
Hard Disk 0 Error	Contact your dealer or an authorized service center.
Hard Disk 0 Extended Type Error	Contact your dealer or an authorized service center.
I/O Parity Error	Contact your dealer or an authorized service center.
Insert system diskette and press <Enter> key to reboot	Insert a system (bootable) diskette into the floppy drive (A:), then press **Enter** to reboot.
Keyboard Error or No Keyboard Connected	Contact your dealer or an authorized service center.
Keyboard Interface Error	Contact your dealer or an authorized service center.

Error Messages	Corrective Action
Memory Size Mismatch	Press **F2** (during POST) to enter the BIOS Utility; then press **Esc** to exit and reconfigure the computer.
Missing operating system	Press **F2** (during POST) to enter the BIOS Utility; then press **Esc** to exit and reconfigure the computer.
Non-system disk or disk error. Replace and strike any key when ready.	Insert a system (bootable) diskette into the floppy drive (A:), then press **Enter** to reboot.
Pointing Device Error	Contact your dealer or an authorized service center.
Pointing Device Interface Error	Contact your dealer or an authorized service center.
Protected Mode Test Fail	Contact your dealer or an authorized service center.
RAM BIOS Bad	Contact your dealer or an authorized service center.
RAM Parity Error	Contact your dealer or an authorized service center.
Real-Time Clock Error	Press **F2** (during POST) to enter the BIOS Utility; then press **Esc** to exit and reconfigure the computer.
Video RAM BIOS Bad	Contact your dealer or an authorized service center.

If you still encounter problems after going through the corrective measures, please contact your dealer or an authorized service center for assistance. Some problems may be solved using the BIOS Setup Utility. See “BIOS Utility” on page 69.

Appendix A
Specifications

This appendix lists the general specifications of your computer.

Microprocessor

- Intel® Pentium® 4 Processor

  - or -

  Mobile Intel® Pentium® 4 Processor - M featuring Intel® Enhanced Speedstep™ technology

Memory

- Main memory expandable to 1 GB Double Data Rate Synchronous Dynamic Random Access Memory (DDR SDRAM)
- Two 144-pin industry-standard soDIMM sockets
- 512 KB Flash ROM BIOS

Data storage

- One internal floppy drive (3.5”, 1.44 MB)
- One E-IDE hard disk (2.5”, 9.5mm, UltraDMA-100)
- One internal removable optical drive (Media bay)

Display and video

- 14.1” Thin-Film Transistor (TFT) liquid-crystal display (LCD) displaying 16.7 million colors at 1024x768 eXtended Graphics Array (XGA) resolution

  - or -

  15.0” TFT LCD displaying 16.7 million colors at 1400x1050 Super eXtended Graphics Array Plus (SXGA+) or 1600x1200 Ultra eXtended Graphics Array (UXGA) or 1024x768 XGA resolution
- AGP 4X support
- ATI Mobility Radeon with 16 or 32 MB DDR Video RAM
- Simultaneous LCD and CRT display
- S-video output

Audio

- 16-bit stereo audio (AC’97)
- Two built-in stereo speakers
- Audio ports for external audio devices

Keyboard and pointing device

- 84-/85-/88-key Windows keyboard
- Ergonomically-centered touchpad pointing device with scroll pad

I/O ports

- One type III or two type II/I PC Card slots (PCMCIA, CardBus)
- One RJ-11 modem jack (V.92, 56K)
- One RJ-45 network jack (Ethernet 10/100)
- One DC-in jack
- One parallel port (ECP/EPP)
- One external monitor port
- One keyboard/mouse port (PS/2)
- One speaker/headphone-out jack (3.5mm minijack, SPDIF option)
- One audio line-in/microphone-in jack (3.5mm minijack)
- Two Universal Serial Bus (USB 1.1) ports
- One IEEE 1394 port - option
- One video-out jack (S-video) - option
- Wireless LAN (802.11b) feature - option

Weight and dimensions

- 326(W) x 275(D) x 39.9/41.9(H) mm (12.8” x 10.8” x 1.57”/1.65”)
- 3.14 kg (6.9 lbs) - 14.1-inch model

  - or -

  3.6 kg (7.9 lbs) - 15-inch model

Environment

- Temperature
  - Operating: 5°C ~ 35°C
  - Non-operating: -20°C ~ 60°C
- Humidity (non-condensing)
  - Operating: 20% ~ 80% RH
  - Non-operating: 20% ~ 90% RH
- Altitude

- Operating: 0 ~ 10,000 ft
- Non-operating: 0 ~ 40,000 ft

Operating system

- Microsoft Windows XP

Power

- Battery pack
  - 5880 mAh Lithium-Ion

    - or -

    4500 mAh Nickel Metal-Hydride
- AC adapter
  - 70-Watt

    - or -

    90-Watt
  - Auto sensing 100~240Vac, 50~60Hz

Options

- 128/256/512 MB DDR SDRAM memory upgrade module
- Media bay modules
  - DVD-ROM
  - CD-ROM
  - CD-RW
  - DVD/CD-RW combo
  - 2nd hard disk
  - Weight saver
- 802.11b Wireless LAN module
- Additional AC adapter
- Additional battery pack

Appendix B
Notices

This appendix lists the general notices for your computer.

FCC notice

This device has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This device generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this device does cause harmful interference to radio or television reception, which can be determined by turning the device off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the device and receiver
- Connect the device into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/television technician for help

Notice: Shielded cables

All connections to other computing devices must be made using shielded cables to maintain compliance with FCC regulations.

Notice: Peripheral devices

Only peripherals (input/output devices, terminals, printers, etc.) certified to comply with the Class B limits may be attached to this equipment. Operation with non-certified peripherals is likely to result in interference to radio and TV reception.

Caution

Changes or modifications not expressly approved by the manufacturer could void the user's authority, which is granted by the Federal Communications Commission, to operate this computer.

Use conditions

This part complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Notice: Canadian users

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Remarque à l'intention des utilisateurs canadiens

Cet appareil numérique de la classe B respected toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Modem notices

FCC

This equipment complies with Part 68 of the FCC rules. Located on the bottom side of the modem is a label that contains, among other information, the FCC Registration Number and Ringer Equivalence Number (REN) for this equipment. Upon request, you must provide this information to your telephone company.

If your telephone equipment causes harm to the telephone network, the telephone company may discontinue your service temporarily. If possible, they will notify you in advance. But, if advance notice is not practical, you will be notified as soon as possible. You will also be informed of your right to file a complaint with the FCC.

Your telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the proper functioning of your equipment. If they do, you will be notified in advance to give you an opportunity to maintain uninterrupted telephone service.

If this equipment should fail to operate properly, disconnect the equipment from the phone line to determine if it is causing the problem. If the problem is with the equipment, discontinue use and contact your dealer or vendor.

CTR 21

This equipment has been approved [Council Decision 98/482/EC - "CTR 21"] for pan-European single terminal connection to the Public Switched Telephone Network (PSTN). However, due to differences between the individual PSTNs provided in different countries, the approval does not, of itself, give an unconditional assurance of successful operation on every PSTN termination point. In the event of problems, you should contact your equipment supplier in the first instance.

Important safety instructions

Read these instructions carefully. Save these instructions for future reference.

1 Follow all warnings and instructions marked on the product.

2 Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

3 Do not use this product near water.

4 Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.

5 Slots and openings in the cabinet and the back or bottom are provided for ventilation; to ensure reliable operation of the product and to protect it from overheating, these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should never be placed near or over a radiator or heat register, or in a built-in installation unless proper ventilation is provided.

6 This product should be operated from the type of power indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.

7 Do not allow anything to rest on the power cord. Do not locate this product where persons will walk on the cord.

8 If an extension cord is used with this product, make sure that the total ampere rating of the equipment plugged into the extension cord does not exceed the extension cord ampere rating. Also, make sure that the total rating of all products plugged into the wall outlet does not exceed the fuse rating.

9 Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.

10 Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous voltage points or other risks. Refer all servicing to qualified service personnel.

11 Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- **a** When the power cord or plug is damaged or frayed
- **b** If liquid has been spilled into the product
- **c** If the product has been exposed to rain or water
- **d** If the product does not operate normally when the operating instructions are followed. Adjust only those controls that are covered by the operating instructions since improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal condition.
- **e** If the product has been dropped or the cabinet has been damaged
- **f** If the product exhibits a distinct change in performance, indicating a need for service.

12 Replace the battery with the same type as the product's battery we recommend. Use of another battery may present a risk of fire or explosion. Refer battery replacement to a qualified serviceman.

13 Warning! Batteries may explode if not handled properly. Do not disassemble or dispose of them in fire. Keep them away from children and dispose of used batteries promptly.

14 Use only the proper type of power supply cord set (provided in your accessories box) for this unit. It should be a detachable type: UL listed/CSA certified, type SPT-2, rated 7A 125V minimum, VDE approved or its equivalent. Maximum length is 15 feet (4.6 meters).

Laser compliance statement

The CD or DVD drive used with this computer is a laser product. The CD or DVD drive's classification label (shown below) is located on the drive.

CLASS 1 LASER PRODUCT
CAUTION: INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.

APPAREIL A LASER DE CLASSE 1 PRODUIT
LASERATTENTION: RADIATION DU FAISCEAU LASER INVISIBLE EN CAS D'OUVERTURE. EVITTER TOUTE EXPOSITION AUX RAYONS.

LUOKAN 1 LASERLAITE LASER KLASSE 1
VORSICHT: UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET NICHT DEM STRAHLL AUSSETZEN

PRODUCTO LÁSER DE LA CLASE I
ADVERTENCIA: RADIACIÓN LÁSER INVISIBLE AL SER ABIERTO. EVITE EXPONERSE A LOS RAYOS.

ADVARSEL: LASERSTRÅLING VEDÅBNING SE IKKE IND I STRÅLEN.

VARO! LAVATTAESSA OLET ALTTINA LASERSÅTEILYLLE.
VARNING: LASERSTRÅLNING NÅR DENNA DEL ÅR ÖPPNAD ÅLÅ TUIJOTA SÅTEESEENSTIRRA EJ IN I STRÅLEN

VARNING: LASERSTRÅLNING NAR DENNA DEL ÅR ÖPPNADSTIRRA EJ IN I STRÅLEN

ADVARSEL: LASERSTRÅLING NAR DEKSEL ÅPNESSTIRR IKKE INN I STRÅLEN

Lithium battery statement

CAUTION
Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

ADVARSEL!
Lithiumbatteri - Eksplosionsfare ved fejlagtig håndtering. Udskiftning må kun ske med batteri af samme fabrikat og type. Léver det brugte batteri tilbage til leverandøren.

ADVARSEL
Eksplosjonsfare ved feilaktig skifte av batteri. Benytt samme batteritype eller en tilsvarende

type anbefalt av apparatfabrikanten. Brukte batterier kasseres i henhold til fabrikantens instruksjoner.

VARNING
Explosionsfara vid felaktigt batteribyte. Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren. Kassera använt batteri enligt fabrikantens instruktion.

VAROITUS
Päristo voi räjähtää, jos se on virheellisesti asennettu. Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

VORSICHT!
Explosionsgefahr bei unsachgemäßen Austausch der Batterie Ersatz nur durch denselben oder einem vom Hersteller empfohlenem ähnlichen Typ. Entsorgung gebrauchter Batterien nach Angaben des Herstellers.

Year 2000 compliance statement

This notebook computer carries the "Hardware NSTL Tested Year 2000 Compliant" logo, which certifies that this model has been tested by NSTL using the YMark2000 test, and has been found to meet NSTL's standards for Year 2000 hardware compliance.

LCD pixel statement

The LCD unit is produced with high-precision manufacturing techniques. Nevertheless, some pixels may occasionally misfire or appear as colored dots. This has no effect on the recorded image and does not constitute a malfunction.

Macrovision copyright protection notice

This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

Apparatus Claims of U.S. Patent Nos. 4,631,603, 4,577,216, 4,819,098, and 4,907,093 licensed for limited viewing uses only.

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